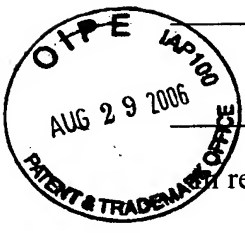


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re application of: Tripathi et al.

Attorney Docket No.: TRIPP030

Patent: 7,027,501 B1

Issued: April 11, 2006

Title: METHODS AND APPARATUS FOR
ADAPTIVE EQUALIZATION

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on August 24, 2006 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed:

[Signature]
Aurelia M. Sanchez

REQUEST FOR CERTIFICATE OF CORRECTION
OF OFFICE MISTAKE
(35 U.S.C. §254, 37 CFR §1.322)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Attn: Certificate of Correction

Certificate

AUG 31 2006

of Correction

Dear Sir:

Attached is Form PTO-1050 (Certificate of Correction) at least one copy of which is suitable for printing. The errors together with the exact page and line number where the errors are shown correctly in the application file are as follows:

SPECIFICATION:


1. Column 5, line 65, change " $y_k X_k^T W_k$ " to -- $y_k = x_k^T W_k$ --. This appears correctly in the patent application as filed on February 27, 2002, on page 11, line 6, equation 5.

AUG 31 2006

Patentee hereby requests expedited issuance of the Certificate of Correction because the error lies with the Office and because the error is clearly disclosed in the records of the Office. As required for expedited issuance, enclosed is documentation that unequivocally supports the patentee's assertion without needing reference to the patent file wrapper.

It is noted that the above-identified errors were printing errors that apparently occurred during the printing process. Accordingly, it is believed that no fees are due in connection with the filing of this Request for Certificate of Correction. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 500388 (Order No. TRIPP030).

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP



Godfrey K. Kwan
Registration No. 46,850

P.O. Box 70250
Oakland, CA 94612-0250
650-961-8300

AUG 31 2006

unequal to avoid instability in the circuit due to signal feedback via the coefficient multipliers 331, 333, and 339.

The output y_k 341 is expressed as the following:

5

$$y_k = x_k^T W_k \quad (\text{Equation 5})$$

where x_k is the n-sample-long vector of input samples.

10 The input samples are delayed versions of x_k . The delay for the first sample is the sum of delay elements 311 and 351. The delay for the second sample is the sum of delay elements 311, 313, 353, and 351. The delay for the fourth sample is the sum of delay elements 311, 313, 315, 355, 353, and 351. The delay for the n^{th} sample can be calculated in the same manner. According to various embodiments, n samples corresponding to n coefficient multipliers are taken.

15

The LMS algorithm is now represented as follows:

$$W_{k+1} = W_k - \mu \Delta_k = W_k + 2\mu e_k X_k \quad (\text{Equation 6})$$

20 The sign-sign version of the LMS algorithm becomes

$$W_{k+1} = W_k + 2\mu \text{Sign}[e_k] \text{Sign}[X_k] \quad (\text{Equation 7})$$

25 In Figure 2, the gradient elements x_{ki} associated with the gradient vector X_k were readily available by sampling at locations such as locations 271 and 273. However, in the distributed-amplifier-based AFIR equalizer shown in Figure 3, the gradient elements x_{ki} associated with the gradient vector X_k are not readily available. Since the LMS algorithm (and almost all techniques for implementing adaptive equalization) require X_k or $\text{Sign}[X_k]$ to be available for the computation of coefficient multipliers, the above distributed amplifier AFIR equalizer structure can not be
30 effectively adapted to improve the integrity of transmitted signals.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB Control number

(Also Form PT-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,027,501 B1

Page 1 of 1

DATED : April 11, 2006

INVENTOR(S) : Tripathi et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the Specification:

Column 5, line 65, change " $y_k X_k^T W_k$ " to -- $y_k = x_k^T W_k$ --.

MAILING ADDRESS OF SENDER:

PATENT NO. 7,027,501 B1

Godfrey K. Kwan
BEYER WEAVER & THOMAS, LLP
P.O. Box 70250
Oakland, CA 94612-0250

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Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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AUG 31 2006